SEQUENCE LISTING

<110> Alexander H. Borchers
Kenneth W. Dobie

<120> ANTISENSE MODULATION OF HEMATOPOIETIC CELL PROTEIN TYROSINE KINASE EXPRESSION

<130> RTS-0345

<160> 87

<210> 1
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 1
tccgtcatcg ctcctcaggg 20

<210> 2
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 2
atgcattctg cccccaagga 20

<210> 3
<211> 2015
<212> DNA
<213> Homo sapiens

<220>

<221> CDS
<222> (169)...(1686)

<400> 3
cggaggcacg gaagatgagg aagatgatca ggaggatgat gaaggtgaag agggagatga 60

agacgatgac gacgatggct ctgaggggac ctcaggggct gccgagctgg gggggcgctc 120

aagctgcgag gatccgggct gcccgcgaga cgaggagcgg gcgccagg atg ggg tcg 177
Met Gly Ser
1

atg aag tcc aag ttc ctc cag gtc gga ggc aat aca ttc tca aaa act 225
Met Lys Ser Lys Phe Leu Gln Val Gly Gly Asn Thr Phe Ser Lys Thr
5 10 15

gaa acc agc gcc agc cca cac tgt cct gtg tac gtg ccg gat ccc aca 273
Glu Thr Ser Ala Ser Pro His Cys Pro Val Tyr Val Pro Asp Pro Thr
20 25 30 35

tcc acc atc aag ccg ggg cct aat agc cac aac agc aac aca cca gga 321
Ser Thr Ile Lys Pro Gly Pro Asn Ser His Asn Ser Asn Thr Pro Gly
40 45 50

atc agg gag gca ggc tct gag gac atc atc gtg gtt gcc ctg tat gat 369
Ile Arg Glu Ala Gly Ser Glu Asp Ile Ile Val Val Ala Leu Tyr Asp
55 60 65

```
tac gag gcc att cac cac gaa gac ctc agc ttc cag aag ggg gac cag      417
Tyr Glu Ala Ile His His Glu Asp Leu Ser Phe Gln Lys Gly Asp Gln
         70                  75                  80

atg gtg gtc cta gag gaa tcc ggg gag tgg tgg aag gct cga tcc ctg      465
Met Val Val Leu Glu Glu Ser Gly Glu Trp Trp Lys Ala Arg Ser Leu
     85                  90                  95

gcc acc cgg aag gag ggc tac atc cca agc aac tat gtc gcc cgc gtt      513
Ala Thr Arg Lys Glu Gly Tyr Ile Pro Ser Asn Tyr Val Ala Arg Val
100                 105                 110                 115

gac tct ctg gag aca gag gag tgg ttt ttc aag ggc atc agc cgg aag      561
Asp Ser Leu Glu Thr Glu Glu Trp Phe Phe Lys Gly Ile Ser Arg Lys
                120                 125                 130

gac gca gag cgc caa ctg ctg gct ccc ggc aac atg ctg ggc tcc ttc      609
Asp Ala Glu Arg Gln Leu Leu Ala Pro Gly Asn Met Leu Gly Ser Phe
            135                 140                 145

atg atc cgg gat agc gag acc act aaa gga agc tac tct ttg tcc gtg      657
Met Ile Arg Asp Ser Glu Thr Thr Lys Gly Ser Tyr Ser Leu Ser Val
        150                 155                 160

cga gac tac gac cct cgg cag gga gat acc gtg aaa cat tac aag atc      705
Arg Asp Tyr Asp Pro Arg Gln Gly Asp Thr Val Lys His Tyr Lys Ile
    165                 170                 175

cgg acc ctg gac aac ggg ggc ttc tac ata tcc ccc cga agc acc ttc      753
Arg Thr Leu Asp Asn Gly Gly Phe Tyr Ile Ser Pro Arg Ser Thr Phe
180                 185                 190                 195

agc act ctg cag gag ctg gtg gac cac tac aag aag ggg aac gac ggg      801
Ser Thr Leu Gln Glu Leu Val Asp His Tyr Lys Lys Gly Asn Asp Gly
                200                 205                 210

ctc tgc cag aaa ctg tcg gtg ccc tgc atg tct tcc aag ccc cag aag      849
```

```
Leu Cys Gln Lys Leu Ser Val Pro Cys Met Ser Ser Lys Pro Gln Lys
            215                 220                 225

cct tgg gag aaa gat gcc tgg gag atc cct cgg gaa tcc ctc aag ctg     897
Pro Trp Glu Lys Asp Ala Trp Glu Ile Pro Arg Glu Ser Leu Lys Leu
        230                 235                 240

gag aag aaa ctt gga gct ggg cag ttt ggg gaa gtc tgg atg gcc acc     945
Glu Lys Lys Leu Gly Ala Gly Gln Phe Gly Glu Val Trp Met Ala Thr
    245                 250                 255

tac aac aag cac acc aag gtg gca gtg aag acg atg aag cca ggg agc     993
Tyr Asn Lys His Thr Lys Val Ala Val Lys Thr Met Lys Pro Gly Ser
260                 265                 270                 275

atg tcg gtg gag gcc ttc ctg gca gag gcc aac gtg atg aaa act ctg    1041
Met Ser Val Glu Ala Phe Leu Ala Glu Ala Asn Val Met Lys Thr Leu
                280                 285                 290

cag cat gac aag ctg gtc aaa ctt cat gcg gtg gtc acc aag gag ccc    1089
Gln His Asp Lys Leu Val Lys Leu His Ala Val Val Thr Lys Glu Pro
            295                 300                 305

atc tac atc atc acg gag ttc atg gcc aaa gga agc ttg ctg gac ttt    1137
Ile Tyr Ile Ile Thr Glu Phe Met Ala Lys Gly Ser Leu Leu Asp Phe
        310                 315                 320

ctg aaa agt gat gag ggc agc aag cag cca ttg cca aaa ctc att gac    1185
Leu Lys Ser Asp Glu Gly Ser Lys Gln Pro Leu Pro Lys Leu Ile Asp
    325                 330                 335

ttc tca gcc cag att gca gaa ggc atg gcc ttc atc gag cag agg aac    1233
Phe Ser Ala Gln Ile Ala Glu Gly Met Ala Phe Ile Glu Gln Arg Asn
340                 345                 350                 355

tac atc cac cga gac ctc cga gct gcc aac atc ttg gtc tct gca tcc    1281
Tyr Ile His Arg Asp Leu Arg Ala Ala Asn Ile Leu Val Ser Ala Ser
                360                 365                 370
```

```
ctg gtg tgt aag att gct gac ttt ggc ctg gcc cgg gtc att gag gac    1329
Leu Val Cys Lys Ile Ala Asp Phe Gly Leu Ala Arg Val Ile Glu Asp
            375                 380                 385

aac gag tac acg gct cgg gaa ggg gcc aag ttc ccc atc aag tgg aca    1377
Asn Glu Tyr Thr Ala Arg Glu Gly Ala Lys Phe Pro Ile Lys Trp Thr
        390                 395                 400

gct cct gaa gcc atc aac ttt ggc tcc ttc acc atc aag tca gac gtc    1425
Ala Pro Glu Ala Ile Asn Phe Gly Ser Phe Thr Ile Lys Ser Asp Val
    405                 410                 415

tgg tcc ttt ggt atc ctg ctg atg gag atc gtc acc tac ggc cgg atc    1473
Trp Ser Phe Gly Ile Leu Leu Met Glu Ile Val Thr Tyr Gly Arg Ile
420                 425                 430                 435

cct tac cca ggg atg tca aac cct gaa gtg atc cga gct ctg gag cgt    1521
Pro Tyr Pro Gly Met Ser Asn Pro Glu Val Ile Arg Ala Leu Glu Arg
                440                 445                 450

gga tac cgg atg cct cgc cca gag aac tgc cca gag gag ctc tac aac    1569
Gly Tyr Arg Met Pro Arg Pro Glu Asn Cys Pro Glu Glu Leu Tyr Asn
            455                 460                 465

atc atg atg cgc tgc tgg aaa aac cgt ccg gag gag cgg ccg acc ttc    1617
Ile Met Met Arg Cys Trp Lys Asn Arg Pro Glu Glu Arg Pro Thr Phe
        470                 475                 480

gaa tac atc cag agt gtg ctg gat gac ttc tac acg gcc aca gag agc    1665
Glu Tyr Ile Gln Ser Val Leu Asp Asp Phe Tyr Thr Ala Thr Glu Ser
    485                 490                 495

cag tac caa cag cag cca tga tagggaggac cagggcaggg caggggtgc       1716
Gln Tyr Gln Gln Gln Pro
500                 505

ccaggtggtg gctcgaaggt ggctccagca ccatccgcca gggcccacac ccccttccta  1776
```

ctcccagaca cccaccctcg cttcagccac agtttcctca tctgtccagt gggtaggttg 1836

gactggaaaa tctcttttg actcttgcaa tccacaatct gacattctca ggaagccccc 1896

aagttgatat ttctatttcc tggaatggtt ggattttagt tacagctgtg atttggaagg 1956

gaaactttca aaatagtgaa atgaatattt aaataaaaga tataaatgca agtcttacg 2015

<210> 4
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 4
tttgtccgtg cgagactacg 20

<210> 5
<211> 19
<212> DNA
<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 5
ttgtccaggg tccggatct 19

<210> 6
<211> 29

<212> DNA
<213> Artificial Sequence

<220>

<223> PCR Probe

<400> 6
ctcggcaggg agataccgtg aaacattac 29

<210> 7
<211> 19
<212> DNA
<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 7
gaaggtgaag gtcggagtc 19

<210> 8
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 8
gaagatggtg atgggatttc 20

<210> 9

<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> PCR Probe

<400> 9
caagcttccc gttctcagcc 20

<210> 10
<211> 30000
<212> DNA
<213> Homo sapiens

<220>

<221> exon
<222> (4334)...(4437)
<223> exon 5

<221> exon:intron junction
<222> (4437)...(4438)
<223> exon 5:intron 5

<221> intron
<222> (4438)...(8453)
<223> intron 5

<221> intron:exon junction
<222> (8453)...(8454)
<223> intron 5:exon 6

<221> exon
<222> (8454)...(8603)
<223> exon 6

<221> exon:intron junction
<222> (8603)...(8604)
<223> exon 6:intron 6

<221> intron:exon junction
<222> (8950)...(8951)
<223> intron 6:exon 7

<221> exon
<222> (8951)...(9103)
<223> exon 7

<221> exon:intron junction
<222> (9103)...(9104)
<223> exon 7:intron 7

<221> intron
<222> (9104)...(11187)
<223> intron 7

<221> intron:exon junction
<222> (11187)...(11188)
<223> intron 7:exon 8

<221> exon
<222> (11188)...(11367)
<223> exon 8

<221> exon:intron junction
<222> (11367)...(11368)
<223> exon 8:intron 8

<221> intron
<222> (11368)...(13127)
<223> intron 8

<221> intron:exon junction

<222> (13127)...(13128)
<223> intron 8:exon 9

<221> exon
<222> (13128)...(13204)
<223> exon 9

<221> exon:intron junction
<222> (13204)...(13205)
<223> exon 9:intron 9

<221> intron
<222> (13205)...(18422)
<223> intron 9

<221> intron:exon junction
<222> (18422)...(18423)
<223> intron 9:exon 10

<221> exon
<222> (18423)...(18576)
<223> exon 10

<221> exon:intron junction
<222> (18576)...(18577)
<223> exon 10:intron 10

<221> intron
<222> (18577)...(23563)
<223> intron 10

<221> intron:exon junction
<222> (23563)...(23564)
<223> intron 10:exon 11

<221> exon
<222> (23564)...(23695)
<223> exon 11

<221> exon:intron junction
<222> (23695)...(23696)
<223> exon 11:intron 11

<221> intron
<222> (23696)...(25876)
<223> intron 11

<221> intron:exon junction
<222> (25876)...(25877)
<223> intron 11:exon 12

<221> exon
<222> (25877)...(26412)
<223> exon 12

<400> 10
gatcttctcg cctcagcctc ccaaaatgct gggattatag gcctgaacca ctgcacctgg 60

cccatccctc atttgattca ttcgacaagc acatgctcat gactcttcaa gccctgtgcc 120

agcctaaggg gctgtggaaa caaataagat atatccctac cctcaaggag ctctccataa 180

cccatcgttc ttggctgtgg gttcttcttg tgtctagctt gactctaaaa atatacttca 240

gtcatccatc catccatcca tccattcatc catccatcca tccatccatc catccatcca 300

tcatccaaca gatacctgtt gattccctat tccagggtta gaagatgact tagatggggc 360

tccctgctgg agatgttctc tgtatggtgg atgaggttga tgagtaaaaa gatgactaca 420

ttgtggggtg gcaatacatc ccattaaaaa ccagccaatc aaaagttgac aaatgacagt 480

ccccattgtt ttgtctcttc tgcctcctct ttctagctag atggtattat gggtttggga 540

tgcttgcctg ttaaaaatga aaacgcttag gcttttccca ttataaagcc acctccttct 600

ggctgggcat ggtggctcac acctgtaatc ccagcacttc gggaggccaa ggcacgcaga 660

tcacctgagg tcaggagttc gagaccagcc tgaccaacaa ggtgtaaccc catctctact 720

aaaaatacaa aaaaaattag ctgggtgtgg tggtgcgtgc ctgtagtccc agctactcgg 780

gaggctgagg caggagaatc acttgactcc agggggcaga ggttgcagtg agctgaaata 840

tcatgccact gcactccagc ctgggggaca agagcgatac tctgtcaaaa aaaaacaatt 900

atgtcacccc ttcttagtga tcatggaact gggggctctt agctgtttct ctctccttct 960

tccaggcttt gccctgggtc atcccatgct ctgtttctcc actccagggt ctgaacactt 1020

acagaatccc tgggtcacct catgtagtcc ttgcagcaac catggaggag gcgtggctgg 1080

cattatttct caaaggcaac ataattgcta agtggaaaac gcagggtgta gacaacatga 1140

atggggggtt atcatttgca gacaaaggca aaataaccta gatggggggt tctcagacat 1200

gagcagcaac agcatcacct ggattgccgg ctaacaagtg ctttctgggc tccactgtca 1260

gattccgaat gtgcatttct aacaggttct tgggtgaggc agctgctgct gctgctgctc 1320

cagggaccca gcttgggaac cactgatcta aatacgcata tctggccagg tgtggtggct 1380

cacacctgta atcccagcac tttgggaagc cgagggaggt ggaacacttg aggtcaggag 1440

ttcaagacca gcctggccta catggtgata ccctgcctct actaaaaata caaaaattag 1500

ccaggtgtga tggcgggctc ctgtaatccc agctactcag aggctgaggc acgagatttg 1560

cttgatctgg gaggcagagg ttgcagtgag ccgagatcac gccactgcac tccagcctgg 1620

acaacagagc gagactctat ctcaaaaaat aataataaaa ataacaaatg aatacacata 1680

tgtgtccttt cagggcactc aggggtcctt gtgtctgaat caagaaactg ctaacagagg 1740

ttgcctctgg ggagcacaac tgggaccttg ggaatcaggg cgggatggaa tcttggtttc 1800

tctcattctc ccttgaaata ggcaatactt tcaaatgttt caaaatgcaa atgtggggaa 1860

gcatgcagaa gagtgaaaag tcttcttccc accctgtccc caaccagcca cttcccctcc 1920

ccagaagcaa ccagtttctc gtgagtcctc ccagatgctt cctccttata taagaaaaga 1980

catctcttcc cgcttatctc acacaagtgg tagataccac acacactgtt ccatgcctct 2040

cgttcagacc ttccatgcag caccttgttc ctgttttgtt ttgttttgtt ttgttttgtt 2100

ttttaggtgg agtttctctc ttgttgccca ggctggagtg caatggtgtg atctcggctc 2160

actgcaacct ccgcctcccg ggttcaagcg attctcctgc ctcagcctcc caagtagctg 2220

ggattacagg catgcgccac catacctagc taattttgta tttttaatag agacagggtt 2280

tctccatgtt ggtcaggctg gtctcgaact cctgaactcg tgatcctcct gccttggcct 2340

cccaaagtgc tgggattaca ggcgtgagcc actgctcccg gacacctcct tcctttttat 2400

accacagggc gtctgtcctg tagatgtcct accgtccatt taacctctgc cctatacagt 2460

ggtcacttaa gttgtttcca gtcatgtact gaagcgaatc tcctggtgta tatgtcattt 2520

ctcccttgtg caaggtctat gggataactt cctaggacca gaattgtcag ggagacagtt 2580

ggtttttttt gtttgtttgt ttgtttgttt ttgagacaga gtctcgctct gttgcccagg 2640

ctggagtgca gtggcgtgat ctcggctcac tgcaagctcc acctcccagg ttcacaccat 2700

tctcctgcct cagcctcccg agtagctggg actacaggct cctgccacca tgctcggcta 2760

attttttttt ttttttttgt atttttagtc gagacggggt ttcaccatgt tagccaggat 2820

ggtctcgaac tcctgacctc gtgatccacc cgcctcggcc tcccaaagtg ctgggattac 2880

aggtgtgagc caccgcgccc agccggggga gacagttctt agtcttacat agttgaatat 2940

tttaccatgg cacaagtcac tttacaacat gaaagcaaag aaggtagatg agcaacatag 3000

catggtgatt cagagcttgg gttctggagt tagactgcct agcttcaaat cctgcctcta 3060

caacttccca gctgtgtgac tctaggcaag tcacttgccc tctctgttcc tcaatttcat 3120

catccataaa atggggccag gagcagtggc tcatacctgt aatcccatca ctttgggagg 3180

ccaaggtgga tggatcacct gagttcagga gttcgagacc agcctggcca acatggtaaa 3240

accccgtctc tactaaaaat acaaaaatta gctaggtgta gtggtgggtg cctgtaatcc 3300

cagctgcttg ggaggctgag gcaaaataat tgcttgaacc cgagaagcag aggtttcagt 3360

gagcccagat cacaccactg cactccagcc tgggtgacag agcaagactc agtctcaaaa 3420

aaaaaaaaaa aaaaaaaaag ggggggaatg ataaaggtga caactccata gagctgttgg 3480

gtggatagca agatagatgt taacttcctc cccagttgat aacagaggaa ccaaaggccc 3540

aaagaggaag gcaacttgct caaagtcaca ctgcaggttt gtggcagagc caaggcaggc 3600

tgaggtcagg tctggggctt ttttccaact gctcctcacc ccagtgaagg tgggaatgga 3660

ttccactgct gctgcttgaa cttttccacc caaatatctc aatattcagg aagaatgaag 3720

aaaatgtccc aggatataat cctaagtata aaattctttc caatctcaca ttgtagctta 3780

gaagttcagg ccaactttat attcaactcc atatatgcgg aggaggattg gttgtaaagc 3840

taacaaaact caggcccttc acaggcttcc aaggtcccaa gaaggatctt ccccgtggtc 3900

ttgtatgctt gtgaaacctg caaaagtaag actttgacca cagctggtta agactgctgt 3960

ctgtttccac tctgtcttcc tgtccatctc cctgtccctc acagcgagca gcactgaaat 4020

gacctatcag ctttttgcac ttgttaatgc tgtattattt ttcttaaagg aagttccccc 4080

actccaaatt gcataggctt cagtctcagc aaacaggatt cacttcgggt aaaatgtcta 4140

ttttgatatc aaaagaatgg ctcctttacc ttctctcccc caaaaaatct ttgagtaaaa 4200

ctgatgctgc aggaagccag accctctgta tcctgacatt cccctgggac ctgcatggcc 4260

acaggcatcc tgtgtaggcc ggacaggact gcatgacccc aggttcacat ttgtcccctc 4320

ccttttccat caggtggttt ttcaagggca tcagccggaa ggacgcagag cgccaactgc 4380

tggctcccgg caacatgctg ggctccttca tgatccggga tagcgagacc actaaaggtg 4440

acaccagccc tccccacctt gtcctccctg ccgaggtgcc ccagctgggg ctggccacca 4500

ccctttcctt ggaaaatgcc ctgggaaagg ctgaaaaacc caaccaggtg ctgtggctgc 4560

caggtttctc ctgctcttgg ccacctgagc tggggagggt tgaggctctg tgcctggctc 4620

tgcccttctt atccaccata gctgccagct taggtcagtg gaactagtgc caggtggctt 4680

aggccctgaa aacaaagaaa catccagctg aagcttgatc ttcactgact tgttttttca 4740

tttgttttgg ttcttgtttt gttttgttct gttttttgag atggagtctc actctgtcgc 4800

caggctggag tgcagtggtg cgatctcggc tcactgcaac ctccacctcc caggtttgag 4860

cgattctcct gcctcagcct tccaagtagc tgggattaca agtgctcgcc accatgccca 4920

gctaattttt gtatttttag tagagacagg gtttcaccat gttggccagt atggtctcga 4980

tctcctgacc ttgcgatcca cccctcttgc cctcccaaag tgctgagatt acaggcgtga 5040

gccactgcgc ctggcctgtt ttgttttgtt tgagacaggg tctcactctg ttgcccaggc 5100

tggtatgcag tggcacaatc tcagctcact gcaacttctg cctcctgggc tcaaatgatt 5160

ctcccatctc agtctcccga gtagctggga ctacaggtac gtgccaccat gctgactaat 5220

cttttctttc tgtttttctt tctttctttt tagtagagat ggggttttgc catgttgcct 5280

aggctggcct cgaacttctg gactcaagca atctgcctac ctcagccttc caaagtgtca 5340

ggactacaaa gtgtcaggat tgtttttgtt ttggtttttt taaatacccg taacagacca 5400

agtaggggag gccaacacag gaggatcact taagcccaaa agttcgagac cagcctgggc 5460

aacatagtga gaccccatct gtatgaaaaa ttttaaaaat tagccaagca tggtggtgca 5520

catctgtact ccctgatact cagaagggtg aggccagatg atctcttgag tccaggagtt 5580

caaggctgca gcgagccata atggagccac tagactccag cctgggcaac agagcaagac 5640

cccatctcta aaaaaataaa acaaaatacc cattacaata gatcttatcc acaagcctca 5700

ttcctccttt cctccctcca taaggaaatg aggtaggatg aggtcgccag aagagactca 5760

agccagcctt ctctgggact ctgctgaaaa tgctccttgg aagcttttgg aagttttaat 5820

gtcaggtgac cagcttcctg gaatttctgt gctgcaaggg tggattcatg ctgattgggt 5880

gcatggatgg caagaacagg cctggaaaac atcgcgtagc tcaaactggc atcgattgag 5940

gctcattgcc tcaaaggaat gaacatcagt aggattctta tgatttcaga tttcatgtgc 6000

taagtgcacc tttactaata catttaggtt cacaactgct tgactcaaat aagccaagta 6060

tattgtataa tatgtgacct cacggtaccc tgaagcaaac agatttgggg acattgatta 6120

aaggcatgtt cctcatgtgg ccttctactt gaccctcagc tatctgaatt ggcgaagctt 6180

tcatgtggct aggataatgc tacccacaat cagtgtggca gctcagtgaa tgcctgggct 6240

ttgtctcttc ccacccaacg agccccattc aagcccccag gggaagaaa aggagataaa 6300

aagacaaagc tgtgcacagc ccagcgcttc tcctctctag ctgtgcccag gacagctttt 6360

ggcttgggct ggtccatcct gcagacaagg gcagagaaat caaagaaacc atcacagatc 6420

tgtggggcag gaaaatgagc ctggtccagc tttcacagct ctctgagatg gggcatgttg 6480

ggaattttag ccgatttaat aaaagttgca gcatgagacc tgtgaatccc accctgctgc 6540

ttcctggatc ctgccacacc ccatccagca gcaaccaagc cagtctcgcc cctgactggg 6600

acagagtggc tgagaggggc tctggagcca gctgcctgga tttgaatccc agctgtgcca 6660

cttaccagct gtgtgactgt aggtgagtta tttcacctct ctgggcttca gtttcctcat 6720

ccgtaaatga ggatgatgat attataaaac ccttacccca tgaggttatt cattcattaa 6780

ataaataata ttataattta tatagttata attcattata atgaatatta ttcttattca 6840

ttcattgttc atctacgcag agtgctttga acttgcctgg catgtacggt aagctattat 6900

tcattcaaca gtataaactg gccaggtgag gtgactcaag cctgtaatcc cagcagtttg 6960

ggaggctgag gcatgtggat cacctgagct caggagttgg agaccagcct ggccagcatg 7020

gtgaaactcc atctctacta aaaatacaaa aattagccgg gcgtagtggc gggcgtctgt 7080

aatcccagct actcaggagg ctgaggtagg agaattgctt gaacctggga ggcagagatt 7140

gcagtgagcc aagattgcgc cactgcactc cagcctggat gacacagcga gactctgaca 7200

cacacacaca aaaaataaag tttaaacttc ccaaatccta tgacattgta ctattatcat 7260

ggtaaagaac actgagacag agggactaat aacttgccca agggcacaca gctcacaaat 7320

agcaaaacgg tggtcatgag ctgaaagact tatgtgtttc tgctctatgt gataatatag 7380

ggtggtgcaa aagtaatttc agtttttcc actacttttg aaggcaaaaa ctgcaattac 7440

ttttgcacca gcctaatatg tatgttaggt tcccattgct gctgtaacaa attaatacaa 7500

acttagtggc ttaaaacaac acccgtctat tctctaacag ttctggggat cagtagtctg 7560

acctcactgg gctcaagatg tcagcagggc tggttccttc tggaggcttc aggggagaat 7620

tcattttctt gccttttta gtttccagag gctacagcat tccttggctc atagtccctt 7680

cctgacatct gtccaagctc ttgtttccat cttcacctct tccactttga ccttcctacc 7740

tccttctaac aagaactcaa gggattacac tggggctacc tggatcatct ggaataatct 7800

ccccgtctcc agatccttaa cttaatcaca tctctaaagt accttttacc atgtaaggta 7860

acatattccc aggttccagg gtttagggca tgactatctt gagggaccac tattcagcct 7920

accacagcat gttcacattt caataactgg actggatttc tgggtttttt tccagaaaag 7980

tcatagcctg agtttttatg aaaaagtaaa aagtatacta tggtctcttg gctttttgta 8040

gggtagatga tagaaagatg gaacaataga tcagaaataa tgaagatgat gatgatgata 8100

gccaacattt gcagagtgtt cagcttccaa gtagtttaca ggcattactt cttttagccg 8160

tcaggcaata ggatcaggta gggaggcgtg agaactattc ccattttaca gatgagaaaa 8220

ctgaggcata gagaggtgac atagtcacat ggccaaggtc tcacgggtgg atgtggtaga 8280

gcctggatga gagcccagga tgcctggctc ccacagccca ctcagaccct cgggcacttc 8340

tgcccaggtg tcaggacggt gccagcggta gccttacagg gtgtcagagt gctaatgcaa 8400

ggtggcaggc ctccaagatg ccattctgag ggtttctct ttggtcaatt caggaagcta 8460

ctctttgtcc gtgcgagact acgaccctcg gcagggagat accgtgaaac attacaagat 8520

ccggaccctg gacaacgggg gcttctacat atcccccga agcaccttca gcactctgca 8580

ggagctggtg gaccactaca agagtgagtc ccaccccagg ggtgacatcc ccaccacgat 8640

gggcccacag actcctagtc acggatgcac tgtggcccct gagacctgct gtgtccttct 8700

tggccatccc ctagacagat agttgctttg gatgcttctg aaggcttagg actgttgagc 8760

aggagggtga ggtggccaag atgtagaggt ggcaccccgt cacactctgc ttgcttggga 8820

atgtctctga tggtggcaac caggtggaac actggagaga tccagtggac caggtagggc 8880

ggcctccaag gagcaacctc tggctggctc ggtgcttgtt gctctcaatt gaccagggac 8940

tctgttccag aggggaacga cgggctctgc cagaaactgt cggtgccctg catgtcttcc 9000

aagccccaga agccttggga gaaagatgcc tgggagatcc ctcgggaatc cctcaagctg 9060

gagaagaaac ttggagctgg gcagtttggg gaagtctgga tgggtaagga cccagggcca 9120

cagcccacag ggccagaggg tggaggggag agggaggcca cttgcttcca ggaacacctt 9180

atggcaaagc gggaatgcta cccaaggcag aggggagat ttaaataata gccataaaga 9240

agcagttccc tgatagcaaa ccaaattgtc ttgctgtgca aacactgatt tgcctttgag 9300

accagtcctg tagtggtcaa aaacttcctt ctgggaagca ggtgtcatgg atgaggaatc 9360

cctccctcat acggagtggg gactgcctaa cagtttggga ttgagataac cagagacctt 9420

ttcagatgat gaaaattaag aatggggaaa tgcagcttgg agatttccag gcaactgatg 9480

aacaggttat tctgagcacc tgctgtgtgc ccagcactgt tagggtcttg tgggaaaatc 9540

agaaaggcac atctcacacc tgctgatttt ccccaagaac ttaagaacaa cactgcctgc 9600

tttgcagggc tgtggggtag atgcagtgcc agcccagtgt ggggcagcct gctgtgttaa 9660

tacgttccaa atgggagcgt tccaaatggg agcgaagaca acttacaggg atgcaaacaa 9720

ctcagccaga taaaataagt ttaaaatcca tgtatttcga ctgtatttat tgcgattctg 9780

ctgcatgcaa ggccgggcac agtggctcac gcctgtaatc ccagcacttt gggaggccga 9840

ggcaagtgga tcaatcaagg tcagcagttc gagaaaaacc tggatagtat agtgaaatcc 9900

cgtctctacg aaaaaataca acaattagcc aggcgtggtg gtgggagcct gtaatcccac 9960

ctactcggga ggctaaggca ggagaatcgt ttgaacccag gaggtggaag ttgcagggaa 10020

ccgagatcgc accactgcac tccagcctgg gagacagagt gagactctgt ctaaaaaata 10080

ataataaaat taaaaagaat ttgacaaaaa agaaaatatg gagaggaagg taagacagat 10140

ctgagtggtg agatttgaaa gccaaaaata tcatataaga cgctagactc ctactacagg 10200

aagcccacgg ttctggattg gagcttcctg gaagccaagg caaaatggaa acccaagcaa 10260

ttataaaatt gacaagaccc accaaatgaa gcagggtggg gtgaggggag ggaacagcat 10320

gtgccaaatc cctgtggtgg gaggtgagtt gggtgcttga gggactgagt gacctgcagg 10380

gtgactggca cataaaaggc aaggggagtt tagtggctga tgaggctaga ggggtggacg 10440

aggctgggtc atgtagggcc tgggggtcat agtaagtctg gcatttattt aagagcagtg 10500

ttaagattaa agtgggcggt gtatgtgtgt gacataacct gagtagtgtt ttaaagctat 10560

ttttatttgt ttgggttttt tgtttgtttg tttgtttgag acagagtctc gctctgtcac 10620

ccaggctgga gtgcagtggc tcaatcttgg ctcactgcaa gctccgtctc ctgggttcac 10680

accattctcc tgcctcagcc tccccagtag ctgggactac aggcgcccac aactgcgcct 10740

ggctaatttt ttgtattttt agtagagacg gggtttcacc gtgttagcca ggatggtctc 10800

gatctcctga ccttgtgatc cgcccacctc ggccccccaa agtgctgaga ttacaggcgt 10860

gagccactta gagctatttt taaatccttg caacagcact tcaaaggcaa agcttaccat 10920

ttccacttta cagatgagga agctgaggaa gccacggctc agagacgtta agccacttgc 10980

cctagtgtgc acagctggga agtggtgaac ccgcctttca acccacagtt gtctgaggcc 11040

taagcccatg atttcgcttc cctctctgag agttgagatg agcaggaaag actttctgga 11100

ggaggcgggt ctgcagctgg gccttctagg gtggtacggg agaccagtgg gctctgacca 11160

ccttccctgc tctctatccc cctccagcca cctacaacaa gcacaccaag gtggcagtga 11220

agacgatgaa gccagggagc atgtcggtgg aggccttcct ggcagaggcc aacgtgatga 11280

aaactctgca gcatgacaag ctggtcaaac ttcatgcggt ggtcaccaag gagcccatct 11340

acatcatcac ggagttcatg gccaaaggtg ctgcgtgctg gggctggggg tgcaggctgt 11400

ggcctatact ggtcaattgc gggcccaagg gtggcttgga catggttctt gcccttgaga 11460

tggccccaat ctggccagga gctcttccaa caagtactca ttgagaatct aatgtggaac 11520

aatccagccc tcctggttag tggggtgaaa tcatgttaag ggtcaccaa ggggaaggga 11580

gaacaagggg ctaccaggag aagggaatgg ggccagaata ctcctgggca atgggagaag 11640

gggcttatgg ttcacagtga gccttagagg ccagggtgtg gcatgggtgg tgggggtgcc 11700

actctcccgc atcagccacc ttccctgtac ttgccaaagc cctgggagag ggagctggca 11760

aagcagcagt tctgccccca cccccgccct gccacaactc aggatttctt ggggaatttt 11820

tttaggccac tgtttcacaa ccattttcaa cccctgccat tttttgtttg tttgtttttt 11880

agggacagga acttgctctg ttactcaggc tggagtgcag aggtgcaatc ataactcctg 11940

ggctcaagtg atcctcccac cccagccccc cgagtggctg ggaccacagg cccatgccac 12000

cacactcagc taattttatt tatttattta catatttatt tttagagaca gggttgccct 12060

ctgcctaccc aggctggagt gcagtggcgt gatcatagtt cactgtagcc tcaaactctc 12120

aggctccagg atcctcccga cttagtctcc ccagtagctg gcactacagg catgcactac 12180

cacacccagc taatttctaa aaaaattttt ttttttttg agacagagtc tcactctgtt 12240

tcccaggctg gagtgcagtg gcacaatctc ggctcaatgc aagctccacc taccaggttc 12300

acgccattct cctgcctcag cctcccaagt agctgggact acaggtgcct gccaccatgc 12360

ctggccaatt tttttgtatt tttagtagag acggtgtttc accgtgttag ccaggatggt 12420

ctcaatctcc tgaccttgtg atccgcccgc ctcagcctcc caccatgctg gaattacagg 12480

cgtgagcaac tgcgcccagc ttctaaaatt tttttctaga gacaaggtct cgccatcttg 12540

ccccagctgg tctcaaactc ctgggttcaa ctgatcctcc caaagctttg ggattatagg 12600

catgaaccac tgagcctggc ctaacatata tatttgtaaa tttcttctat agatggggtc 12660

ttgcgatgtt gcccaggctg gtctcaaact cttggcctca ggtgatcctc tcacctcggt 12720

ctcctaaagt gttggaatta caggagtgag cctcgtgcct agccactctg cccatttttt 12780

gataaacaga atcatctcat gcaatcccat ttagtgcgat ttgaaacctc aagccttttt 12840

cattttaact atgcaattat gccagtcctg tgaaggcatg atcccagcca tccaggctca 12900

ggggctgtct cagtcacaga atccatctag caatcaaaaa gtcacttcac taaaactcaa 12960

ttctctttct caaacactag gaattgcaaa caaatattcg tatttaaatc tactactatg 13020

aaaaatcttc accacacact aaagtactag attggtgcaa aagtaattgt ggtttttgcc 13080

attaaatagt aaaagtagta aatgttcctc ccctctcccc catataggaa gcttgctgga 13140

ctttctgaaa agtgatgagg gcagcaagca gccattgcca aaactcattg acttctcagc 13200

ccaggtgaga gcctaacgag gaaacgggga agggaaacag gaattcgatt tttttacttg 13260

ccaaatattt actgaccaca tactatgatg atagcagtaa taataatggg taaaatgtat 13320

tgagagctca gtataaaact atgttttttg catatatttt attatacatg tactcattca 13380

tttaatcatc ctataagctt tataggctgg gatttttgtt atctattttg gtataacaaa 13440

ccatccaagt cctagtagct tgaaacaaca gcaattgtta tttctcatga tcctgtgggt 13500

tgcctgggtt cagctgggtg gttcttctgc tcgtcatggt aaagtgaggt gcagatgttg 13560

gcacttgccc aggctagaat gtccaagaca tggctcagcc tccagggtct ctccacatag 13620

cccctcacca cccaatcacc cagcctgagc ttcttcacgg cgcagcagct gggttccaag 13680

acagagctgg accaggggcc aagccttcat gagcaggctc tcattaagcc tctgcctgca 13740

tcaggcttgc taatggccca ttggccaagt cacatagcca tgcccagaat cagtgtggga 13800

ggggactgac caaggacaca aatcccaggg accccctcaa tgtaacagtc tggccacaga 13860

gtaggtaatt atcatcccat tttacagaat aggaaattga agcatagagc agaagtaaag 13920

tacagatgtg gaaactgagc cccagtgtgg ttaagtggct tgcacaagtt actgtgctaa 13980

ttatggggga tatagcagtg aacaaaatga aaatgttcct gtcctaatag agttcacaat 14040

ccaggtggga agatgagtat taaataacca aatctcttag agaccatgac ccaagtggtc 14100

ctggctgagt caaaagagca cagtatctaa caaagtaaat aatgttcaca aatcgcaaaa 14160

acactgctga aaacctaatt ttctttctca tgttccccac gccccttgca gctcctctca 14220

cccccagcct aagcagtttt ttcacttctg tcctctctca tgctctctct gatgtctggg 14280

aaaacagagt gtaaggacgg ggtggtatta gagtgcatag ctagagcatt tagcctggtc 14340

caggagcaat cagagaatgc ttcctggagg aagtggcctc taggccgagc ctgaaggatg 14400

aatagaagtt cagtagatga agagaaaagg taaaggtctt ttagacaaaa gaaacagcct 14460

gtgcaaaagt aggtgaagga gttcagccta ctcagcagga gcccagggat agtgggagtt 14520

gagtgagacc ctgcctgggc ctcagctggg cctgctggag atgccaaggg cagggctcat 14580

ttgagtatgc aaattcaggg gcccagagga caccacaaag tgtaacaaaa gactctactt 14640

tcagagcctg gaatgccaga ggcatatgga aatgtgtttt cactcctatg ggccaggtcc 14700

tctgggagac aatagactgg tctgttgcta aattatcatc ttcaaactag cagaagccct 14760

gctgggcagc agtcaccgac cagggcaaga gccactctgc ccgtttcaca gaggggaaaa 14820

caaaccaagg gaggaaaaga ggttctgggc cttcatctgt ccagaagcag aggtagattc 14880

agagcccagg gacagaaagg agcccacctg gggctttggt cttcacctcc agactcagag 14940

aggcagcttg gagcagcagg tggagaactg gaccacacat gtggggtttc tgtagtcaca 15000

gctttgtggg tgacatgaaa tgttattcag tagctgcata tatacaaaca ggtcaaaaca 15060

gagctgctct gactgaagca gggtgggggg cttatctgtg gcctttcttt tgtctccccc 15120

acccccatat aaccttgagg catccatagg attcagttgg aagagctcta caggtccttc 15180

cagctctgat gctgtgactc cctgatactc tttggaagca aacccaaggg tgcccaacct 15240

catggcaccc tatctggggg tcatgaaatc tcaccgcctt tatcaacccg cagtgcttac 15300

acctgggccc aataaaccta ctcgttattc attcagtcag cagaccctgg agaagcaaca 15360

ctattagcat ctgggcttag gagtcacaca gagttttgtt ttgatctcag ctctgcctgt 15420

gtagcctcaa gcaagttgct taacctctct gagtgccact ttcccccact gggagcactg 15480

ggagccactc tttaaataaa tacttaacta tgtgccaaac actctactaa gcccttgatg 15540

taggcttagg ggattcatct tcacatgacc ccttggaacc aggtgctatt acagagaaga 15600

aaagtgaggt acagagagat gacacaactt gcttgacatc acagagctgc agcgctcaag 15660

ctgagttggt ccagctccag agccatttag ctattaccct ctgctgtctc ctaagtgggg 15720

tgtcatccct gccccatcga gctcctgtga aaatcagtag catatgagca tctgccagtg 15780

agcatcaaac agtggtaact accagcatta gtccttgctc cagaagaaaa gcaaggcaaa 15840

aaagctgggc caagtaacag gtaagtgcgt ggaccccaag cagcgctttt ggagctccag 15900

ccctggctcc gcaacttgca agctgtgtaa gctggggcca cttacctatt tctctgggct 15960

tcagttttct tatctgtgga aatggggctg ataacaaaag tgcctcctcc aaagcacatg 16020

gtaaatgtca cataagtgtt taagtatcat cttataaata agctatgatg ccttccatta 16080

gcatcataac ttttgttaac tgttcatcta aggactcata aatttcccac actcccaggg 16140

ccaagatgct gtctcactcc accctggcaa cctcatcccc atttcgtccc cacccccac 16200

tattctaaac aaaatcagag tctcttccaa gtttttactg aaaaatttgg gtctctgggt 16260

ctcccttggg catgacagct caggcctgta atcccagcac tttgggaagc tgaagcagga 16320

ggatccttta agcccagcct gggccacata gtgggacctc ttctctatta aaaaaaaaaa 16380

aaattctttt taaatttaat ctggcatagt ggcatgcacc tatagtacca gctgcttggg 16440

aagctgaggt gggaagactg cttgagccca ggaggcacag gttgcagtaa gctgtgatcc 16500

caccactgta ctccgtgaca gagcaaggcc ctgtctcaaa agaaaaaaaa aaagaagaaa 16560

gaaaagaaaa aagcaaagca tgggtctcca ttctaactgc ctcgggtgcc ccctgctgtc 16620

caccccttgc aagtgcgcca cccacttgcc tcagaccttg agaagccggc cggtggtgct 16680

ttgattgttc tgtctagtca gacgccctca cttccagaat aatttcatca gactgcaccc 16740

agctgcagtc tgccggagca ctggagtgct gggttattta gaggcagcag gatgcactgg 16800

attgggagtc ctcagactgg tttgagcctg acattcagaa ttttcctggt ggtgtgatct 16860

ggaacaagtg gttccatgtc tgtaaaacag agattatgat cattcctgcc tcaaagagct 16920

caagcccagt ttgtaaacca aaagtgctgc tttctgggca tctgagggtt catcttcaac 16980

cgcttttgtc caaacccttg taagtaaaaa tgtctgcaag atataatccc tgtgttttca 17040

tcagaggctt ctagggctcc tggtgtgaat aagaatcctc cacgcagtct gttagtcact 17100

cagcagccat ggtgatcttt aaatgtacat cagaacatgt cacgctcctg ctcgaaggcc 17160

tctaatatct ccccaacacg ctcagaataa aatccaccct cctctcctga cctacaaggc 17220

agttcatgat tggcggcctc cctctcaact tcaactctcc ccactctctc tgtggcatct 17280

tctgctggcc acactgacct ctgtgctgtt ccatgaacac ccaagctctt acctacctcc 17340

acgcctttgc atctcatgtt ctctctgcct agaatattct tatgcgacac acttattatt 17400

atcatcattc agatctttgc taaaatctca ccccctcaaa gcaggtttcc ctgaacgccc 17460

aatccaaaaa agctctctac aggtcatatt ttgttacttt gttttatctt ttttttcttt 17520

ttgagacaga gtcttgctct gtcgcccagg ctggaggaca gtggcacgat ctcggctcac 17580

tgcagcctct gcctcctggg tccaagcaat tctcgtgcct caacctcctg agcagatggg 17640

attacaggcg tgcaccacca tgctcatctt ctttttgtat ttttagtaga gacggggttt 17700

cgccatgttg gccaggctgg tctcgaactc ctggcctcaa gtgatccgcc cacctcggcc 17760

tcccaaagtg ctgggattac aagtgtaagc caccatgccc ggcctgtttt atcttttctt 17820

tatggtactt accacctgca ggggctttgc cgggctcatc acctgttcaa gcaacatgtc 17880

tggcacccac aagacactca gtggatttct gttgagtaaa taagtgaatt ttccctaccc 17940

aggctggggc atgaggaaga tatgagaggt atagcagaat atgacatgaa cctgggttgt 18000

ccccagaaag agagttgaag gtgaaagctc ttcatagtat cctagggttc gtgtgtgtgt 18060

gtgtgtgtgt gtgtgtgtgt gtgcatgtgc acgtgtgtgt gtatgtgtgt tcctggaaga 18120

ataggtcctg gagaaatagt cccattgctt tttccctgag aacatttcaa agtgctctct 18180

ggaagtcttg gaattctaga gaatccccca aactggccca ggcctcctta gggatccccc 18240

taacctgaat gggttgatgg aggaatgcca ccctgagccc tggggccctc ccgacacaaa 18300

agggagggct ggtgcagaca tttcgcattt tcttcacttg aacacctctc tgctgctttt 18360

gggtggggcc atcttggcgt aggccaggtc tgaggacaaa ggtgtctctg tttggggtgc 18420

agattgcaga aggcatggcc ttcatcgagc agaggaacta catccaccga gacctccgag 18480

ctgccaacat cttggtctct gcatccctgg tgtgtaagat tgctgacttt ggcctggccc 18540

gggtcattga ggacaacgag tacacggctc gggaaggtag ggaacgctgc caagcagccc 18600

cacgttgccc atttggatgc ttgtgagtgt tgagagttga tacttgtgag agcgattggt 18660

aaaatgcaag ggactgcccc agtactagct gtgcattctt gagcttggtg gatccttctg 18720

gataatgtcc tgaacttcag agtctcactc agagattttg aggagatttt agatcagatt 18780

gagaagtact gatagatttt agagggagtg ggcaaatata tgtcgaaatt aagggtaaga 18840

gcagctttgt gcataacaga caaaaatggg gagggtatcc aaatgtccat agcaggagga 18900

tggattgtgg tatattcaca caatataata ccacgcagtg atgaaaaagc acaaactggc 18960

caggctcagt ggctcacgcc tgtaatccca gcactttagg aggccaagac tggaggactg 19020

cttgagccca gaagctcaag accagcctgg gcaacacagg aagacctagt ctctacaaaa 19080

atttaagaaa ttagccaggc atggtggcac atgcctgtat gcctgtagtt gtggctactc 19140

aggaggttag ggtgagagga tcacttgagt ctaggaagct gaagctgcag taagccatga 19200

tcatgccact gcacccagcc tggtggacag agcaagatct tgtcaaaaga aaagaaaaga 19260

aaagaaaaga aagaaagaaa gaaagaaaga aagaaagaaa gaaagaaaga aagaaagaaa 19320

gaaggaaaga aagaaagaga gagaaagaga aagaaagaaa gaaagaaaga aagaaagaaa 19380

gaaagaaaga aagaaagaaa gaaagaaaga aaagaaagaa agaggcacaa gccaatgcta 19440

aatgcaccaa aatgggtaac tctcacaggt ataatatcaa aatgaaagaa attagaccaa 19500

aaaaaaagag tagatgccac ttggtttcgt ttttgtgaaa ttctaaaaga gacaaaacat 19560

gtaattggac attcatggca gcattcttcc taatagccaa aaaatggaaa caacactctt 19620

taatgtccat caattgatga acagacgaac aaaatgtgat atatccatac aatggaatat 19680

tatttggcca taaaatggaa tgaagtacta cgccaggcta gaacacagat gacccttaaa 19740

aacattttgt taaaggaaag ccaacatgaa gaccacatgt tgtataattc cccttctatg 19800

aaatgtccag aagaggcaat ctttttttt tctttgagat ggagtcttgc tgtcacccag 19860

gctagagtgc agtggctcaa tctcagctca ctgcaacctc tgcctcccag gttcaagcga 19920

ttcttgtgcc tcagccttct gagtagctgg gattacaggc gcacaccacc atacccagct 19980

aatttttgta tttttagtag ataacagggt ttcaccatgt tggccaggct gaactcaaac 20040

tcctgacctc aagtgatccg cccgccttgg cctcccaaac tgctgggatt acaggtgtga 20100

gccaccatgc ccggcccaga acagacaaat ctaaagagac agaaagtaga ttattggtgc 20160

ctacagctgg tggtggggag ttgggagaaa tgaggagtga cttctgtggg ttttttgcag 20220

ggaaatgtga tgaaagtatt ctaaaatcca caactttgta aatattctga aagccacgga 20280

attatacact ttaaatgggt gaaatgtatg gtctgtgaat tctatctcga taaagctgtt 20340

aaagaaagaa acaggcaaaa tttatttata gcactagagg tcagaattgc agtcaccttt 20400

agtttctgtt agcctaatat ttatttattt atttatttat ttatttattt atttatttat 20460

ttattttgag acggagtctc gctctgctgc ccaggctgga gtgcattggc gccatctcag 20520

ctcactgcaa actccacctc ctgggtttaa gtgattgtcc tgcctcagcc tcccaagcag 20580

ctgggattac aagcatgtgc catcatgccc agctagtttt tgtattttta gtagagacag 20640

ggtttcacca tgttggccag gctggtctcg aactgatgac ctcaagtgat tcacccacct 20700

gggcctcccg aagtgctggg attacagatg cgagccactg tgccagtcct atttattttt 20760

ttaaagagac gggtgcggcc gggcacagtg gctcacacct gtaataccag cactttggga 20820

ggccaaggca ggcggatcac aaggtcagga gtttgagacc agcctggcca atatggtgaa 20880

accctgtctc tactaaagat acaaaaatta gctgggcgtg gtggcaggtg cctgtagtcc 20940

cagctactcg ggaggctgag gcaggagaat catttgaacc cgggaggcag aggttgcagc 21000

aatgagccga gattgtgcca ttgcactcca gcctgggtga tagagcgaga ctccgtctca 21060

aaaaaaaaaa aaaaaaaaaa agataggtgc ttgctctgtt gcccaggctg tagtggaggg 21120

gtgagatcat agctcactgt agcctccaac tcttgggctc aagcaatctt ccagcctcag 21180

cctcctgagt acctgaaact acagatacgt gctaccatgc ccagctaatt ttttaattat 21240

ttgtagagat agtgtctcac tgtgttgccc aggctggtct caaactcctg gacttacgtg 21300

atcctcctgc ctcaggctct gaaagtgcta ggattacagg catgagccac tatgcacagg 21360

ctgcagtcac cttaagtaag ggggtattaa ctggaaggac gcagaaagga gcgttctgaa 21420

atgctgaaaa tgttctacag cccaatctga tggtgattac aagggtatat atatatatat 21480

aaagctgcag caaaatggat attaaagatt tgtgcatatt atttcatgta cgttataact 21540

cgattaaaaa aaatttagac cgggcacagt ggctcatgac tataatccta gcactttggg 21600

aggccaaaat gggcagattg cttgagccca ggagttcaag accagcctgg gcaatatagc 21660

aagaccccat ctctacaaaa aatttaaaaa taagtcaggc gtggtggtgt gagcctgtgg 21720

tccctgctac tcaggaggct gaggcgggag aatcgcttga gcccaggagg ttgaggctgc 21780

agtgagccaa gatcatgtca ctgcactcca gcctgtgtaa cagagcaaga ctttgtctca 21840

aaaaagtaaa taaatagggc cgggcacgtt ggctcatgcc tgtaattcca gcactttggg 21900

aggctgaggt gggaggatca cgaggtcagg agatcgagac catcctggct aacacggtga 21960

aaccccatct ctactaaaaa tacaaaaaat tagccaggcg tggtggcggg cacctgtagt 22020

cccagctact tgggagactg aggcaggaga atggcgtgaa agccgggagg cggaacttgc 22080

agtgagctga gatgacacca ctgcactcca gcctgggcaa acagagcgag accctgtctc 22140

aaaacataaa taaataaata aataaataaa tgtaatgact aaaggaataa aagtagaatg 22200

tataatttct aaaccagaag aagataagca ggaaatcaag aaaagtctgt agatccaaag 22260

gaggaaggga gaaaacatat acacacacac acactctcac acacacaaac acacacatag 22320

aacattttca aaacttgacc atgtactcag tcataaagca ggtctcaaca aattccaaag 22380

aacatatatt ctatagacca tgttcaccaa ccatgatata attaaactaa acacttttta 22440

aaaaaggata actatgccag gtgcggtggc tcacacctat aatcccagtg ctttaggagg 22500

ccaagatggg aggatcactt gagcccagga gttttgagaa caggctgggt aacataataa 22560

aacactgtct ctacaaattt ttctattttt ttatatttta ttttatttta ttttatttta 22620

tttttgagac ggagtctgac tctatcatcc aggctggagt gcagtggtgt gatctcggtt 22680

cactgcaacc tccatcccct gggttcaagt gattctcctg tctcagcctg tagctggaac 22740

tacaggcacc tgccaccatg cccagctaat tttgtatttt tagtagagat ggagttggcc 22800

aggctggtct cgaattcctg acctcaggtg atcctcctcc ttggtctccc aaagtgctgg 22860

gattacaggc acaagccacc atacctggcc aaaaaaattt ttttaattag cttggcataa 22920

tggggcacac ctgtaacccc aggggcttga gaggctgagg caggaggata gcttgaggtc 22980

aggagttcga ggcttcagtg aactatgatt gtgccactgc gctccagcct gggcactctg 23040

tctctaaaag aaaaaaaaaa tgaaaaggct aactaaaccc atgtcagact aggtgggagg 23100

aagggcgggt aaagggagag acacatagtg actggtggga acctcatggg ctgagagcca 23160

gaatcctccc ttttcccatc gcccaggatg agaggactga ggcatcagct gcaacctgga 23220

ctcaaggccc cctgaagtcc ttctgtcccc aaagacctgt gacctctggg attccactct 23280

tcggagttgc agttaactgg ggtatcagct gaatcaacga ggaggattct agagtgaact 23340

tccacaccat accccaggcc cctaagccca ctcctccttg tttagccatc tgtcctcagg 23400

atggatgtcc cttgcttcca cagggaggcc acgtatcagg gaaattgcag gtctgcaggg 23460

gcagatgttg gcagctcttg cccttgcctg ttcccccacc ttagcagagc caaccctcac 23520

tactccccag ccttccccga ctctgctctg ttcaaccctg caggggccaa gttccccatc 23580

aagtggacag ctcctgaagc catcaacttt ggctccttca ccatcaagtc agacgtctgg 23640

tcctttggta tcctgctgat ggagatcgtc acctacggcc ggatcccttа cccaggtagg 23700

gaaggggcat cagctcaggg ctgctaccag ggcccagtct ggcaatgggc tcatctcaac 23760

aacatgtcca ttcaaactga gttcttgatc ctcaccccca accttccctc acctttcctg 23820

tcttagttaa aggcacctcc atccatctaa tgtcttaagc ctgaaatctg ggggcttcct 23880

tggcccttcc ttctctctca ctcctatgac ttttttttтt ttttttttтt ttttgagac 23940

ggagtctccc tctgtcaccc aggctggagt gcagtgacgt gatctcggct cactgcaacc 24000

tccgcctccc aggttcaagc gattctcctg cctcagcctc ctgagtaact gggattacaa 24060

gcatccacca ccatgcctgg ctaatttttg tatttttagt agagacgggg tttcaccatg 24120

ttggccaggc tggtctcgaa ctgctgacct taggtgatgc gcctgcctcg gcctcccaaa 24180

gtgctgggat tacaggcgtg agccactgtg cctggcctca cccctatgac atctgagcag 24240

tcacagggtt ttggccactc gactccaaaa catatcccaa gtctcaccac tttgaacccc 24300

acagtctcca ctgcatccag gccagcgtca tctcccatag atggtgcagc ggcatcctca 24360

tcagtcttac tgctttctcc ctcctcgtcc tacagcctat tctccacttg cagccagaag 24420

gataattcta aactttaaat cagatcttgt cctttctcca cctttttttt ttttttaag 24480

acaaggtctc actctgtcac tgaggctgta gtgcagtggt gtaatcatag ctcatggcag 24540

cctcgacttc ctaggctcaa atgatcctcc cgcttcagcc tcccgagtat ctgggaccat 24600

aggcacatgc caccatgtct ggctattttt tatttttta atttttttgt agagacttgg 24660

tctcactacg ttgtgcagcc tggtctctaa cttccaggct caaacgatcc tccagccttg 24720

gcctcccaaa atgctgggat tacagacaca caccaccatg cccagctaat tctttaaatt 24780

ttttgagaga caaggtattg ctatgttgcc gggctggtga tttccatttt taagcgatgc 24840

tttcagcatg gagagtgaat gggagggaaa gggaacaggg tggcagccag tgaggaggcc 24900

acagcagtgg cccaggcaga ggtgatgatg gtctggacag ggtggtggca ttcgtgactg 24960

gcatacgttg atgaactggt gctacgtttc aaaaggagaa aagatctgac ttgctgactt 25020

aggaggtgag agagagagaa taaaggatga ttaccctggc tttgcaccac agggtgggta 25080

atggtctagg gatagaaatt ggagagctct gttttagctc tgctaaattt gagttgactt 25140

aaatatagag acatccaagt aaaggaagca cttgagttca tgagtttgga gtttgagact 25200

aataatataa aattggggat cacagacatt gaatggctat tcttatgaat agctaataga 25260

aacttgaact gaacaaaaaa atggtcccac ccataggtta acattgaatc tggccacctg 25320

aatgttttgt cttgagggtg cactagtcaa aaccaggcaa cacacaatag acgctgaatc 25380

cattaggatg tgttccacag caagcaacaa aataacagac aaagagtaac tgaaatagaa 25440

gcaatctatt actcccaatc ttccattggt gactggttag ttcagcaact cagcagctgt 25500

caggactctg ggttcctgtc tctatgatgg tcttctccat gttgtcagct ccaagtatca 25560

taagtatctc acagtgttca aaggaagaga tgaagggtgc gttctccaaa gactctcctc 25620

taagcgggag gaaaaacctt tccatcactt tcccagcaga cctccccatc agctcccatt 25680

ggcccaaact gggtcccagg cccatgtcct agctgcaagt gaagctgagg gtggaagtct 25740

gtctttcaca gtggaagggg ctcagcttgc aaggtgaggt ggggagtgat gcctgctggg 25800

gaggccacag ggcctgccac ccctgggctc tcatttccca actgcttccg tttctaattc 25860

cacggctcct tttcagggat gtcaaaccct gaagtgatcc gagctctgga gcgtggatac 25920

cggatgcctc gcccagagaa ctgcccagag gagctctaca acatcatgat gcgctgctgg 25980

aaaaaccgtc cggaggagcg gccgaccttc gaatacatcc agagtgtgct ggatgacttc 26040

tacacggcca cagagagcca gtaccaacag cagccatgat agggaggacc agggcagggc 26100

caggggtgc ccaggtggtg gctgcaaggt ggctccagca ccatccgcca gggcccacac 26160

ccccttccta ctcccagaca cccaccctcg cttcagccac agtttcctca tctgtccagt 26220

gggtaggttg gactggaaaa tctctttttg actcttgcaa tccacaatct gacattctca 26280

ggaagccccc aagttgatat ttctatttcc tggaatggtt ggattttagt tacagctgtg 26340

atttggaagg gaaactttca aaatagtgaa atgaatattt aaataaaaga tataaatgcc 26400

aaagtcttta ccaaaacgtt ggttttcctg tccttccaat tcctgaatat ctatttgcct 26460

tcttgctgta tgacaagtca gaaatggtga aggactctcc cggggaccag aaatacaaag 26520

acaagtgggg ttcagactgg gtgctgtggc tcccacctat aataccagtg ctttgggaga 26580

ccgaggagcg ggggattgct tgagcccagg aggtcgaggc cacagtgagc tatgatcgtg 26640

ccactgcact ctagcctgag cgacacagtg agaccctgtt taaaaaaaaa aaaaaaagat 26700

gaagaagaag aaagaaagga aaggaaagaa aattggggtt caatgcttga ggttttctaa 26760

ctgccctaaa atagttactg gctatattag tttcctcttg ctcctgtaac aaattaccac 26820

atatctggta gcttaagaca acaaaactgc ataacattac ttggccgggc ataatggctc 26880

atgcctatag ttccagcatt ttgggagact gaggtgggtg atcacttgag atcaggagtt 26940

cgagaccagc ctggccaaca tggtgaaacc ccgtctctac taaaaataca aaaattagcc 27000

aggcatggtg gtgggcgcct gtaatcctag ctactggaga ggatgaggca ggagaattgc 27060

ttgaacccgg gaggtggagg ttgcagtgag ccgagattgt accactgcac tccagcctgg 27120

gcaagacagc gagaccctgt ctcaatacat acatacatac atacatacat gtataacctt 27180

actgttccag aaaagcaaga ccctgtctca atcaatcaat caatcaatca gtcaatacat 27240

gtataacctt actgttccag aagtcagagg gactgaaatg ggttggcagg gctgcattct 27300

ttttggaggc tctaggggat aatttgtttc cttgcctttc ccagtttcta gaggctgctc 27360

ctattccttc actcatcagc ccctttcgtt cattactcca aactttgctt tcatcttcat 27420

atctcctctg agtcttcttc ccctctttta tttgtaagaa ctccttggac ccacctggat 27480

aattcagaat aatcttctca tctcaggatt cttaatcacc tttgcaaagt cccttttgcc 27540

atgtgaggta acattttcac acgctctgag ggttaggaca tgaacatctt tcgacggggg 27600

gcacttttct gccttctcca ctggtatcca gatgctggat gggttttgcc tccaaggaga 27660

tgggtcttcc aggatgacag gaatggtttc tcatgatctg ggaccctgac tttcctgtta 27720

ggccacattg ctataagagc tggtcagttt acagctcccc agagctgggg gctgcctgca 27780

gacctgacgt ttcccatggg tcaagcagcc atcatacttg tcgaagtggt atttgccatt 27840

gcaggaatcc tggtctggag atatggctgc tgagaggtgt ctagtaccct acaggggaag 27900

ctctcagtgg aggggtggga gacctgcgta ggaagcagag aagacgaagc agtgcgggct 27960

tcctgaatgt tgcctcagct gaaagaccct ggcagctagt ttttatcata gagagaaaga 28020

caaaagaggt ggacaatggg tgaaaacgaa acaccacctt tctatattat tgcatcccct 28080

gaaggttgta catcacatca ccccccaggg tcccatggaa tcctatacta acttgattct 28140

gtacttctga gtagggtggg gttctaacct taggaactga atataagaac agtggaaaat 28200

aaagctagca gtgtttcaat ttacctagtt ggtaatttct ttcttgcttt ctagtttggg 28260

gtatggcttg ggtacatgaa agcagagccc agggtcttct gatggaaatg ttcccttatg 28320

atttgtgata ataatccaat gggaggagta catttccctg ctccatcagt gttgagcttg 28380

accgtgagac ttgctttagc caatgggatg ttagcagatg tgatgcaagc agaggcttga 28440

aacgtgcttg tggggctggg cttgccttcc agtcttttgc cctgaaaaga acatggtccg 28500

aggaagatga gtgacagatg gagcagacct agaccaacct gcaggcctga gcccagccta 28560

gatcaactga gctccatctg acctgtggac atgtgagaga gaaatagatg cttttgtgtt 28620

ctggggttgt tttgttacat aaaagtatga cagccacagc aactgaggca cgatctcagg 28680

agttggagcc tattgcttat gaacaaggtt aagagatcaa tttctgcttc ttactctttc 28740

aatttatacc gcccaaacca acactgattt gtctctctgg tcaccgaaaa gacaggtaaa 28800

aacatgggga tagatacaac accaaaagca tgatccacaa aagaaaaaaa agataaactg 28860

tacctcttta aaattaaaaa ctctgctctg ccaaagacac tattaagaaa atagaaacat 28920

ggccaagcgt ggtggctcac gcctgcaatc ccagaacttt gggaggtcga ggtgggtgaa 28980

tcaccagagg tcaggaattc gagaccagcc tggccaacat ggtaaaaccc tgtctcaact 29040

aaaaatacaa aaattagcca ggcatggtgg cgggcgcctg taatcccagc tactcgggag 29100

gctgaggcag gagaattgct tgaacccagg aggcggaggt tgcaatgagc caagatcaca 29160

ccattgcact ccagtctggg tgacaagagc aaacctctgt cttaaaaaaa aaaaaaaaga 29220

aaaagaaaaa agaaaagaaa agaaaagaaa aatgtgattc ccaagcttgt agaaaatatt 29280

tgcaaaagat atctctgatg aaggactggt atctgcaata tataaagaac tcttaaaacc 29340

caacaattaa aaaaaaccgt atctgctaaa atagctgaga ttcaaaacac tgatgacacc 29400

agatgctgag gaggatgtgg agcaacagga actctcattc attgctggtg ggaatgcaca 29460

acggtacagc cactttggaa ggcatctggc agtttattac caaactaagc ataacctact 29520

acacaatcca gcaattgtgc tcccatatga gttgaaaact tacgtctaca cacactcaca 29580

aaaatggcac atggatattt acagcagctt tattcataaa tgccaaaact tggaaacaat 29640

taagatgtcc ttcaataggt gaatggataa acaacttgtg gtatattcac ataatgggat 29700

attattcagc actaagaaaa aagagttgac caggtgcagg tgcagtggct cacacctata 29760

atcccagcac tttgggaggc taaggtggga ggattgtttg agcccagaag tttgagacca 29820

gcttgggcaa caagtgggac ccccccccccc accatatcta caaagagtta aacatttagc 29880

tggttgtggt ggcatgcaac tgtggtccca gctacacagg aggctgaggc aggagaaaca 29940

cttgagccca ggagattgag gttgcagtga gccgtgattg taccactgca ctccagcctg 30000

<210> 11
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 11
tcgtcatcgt cttcatctcc 20

<210> 12
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 12
cctcagagcc atcgtcgtca 20

<210> 13
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 13
cctgaggtcc cctcagagcc 20

<210> 14
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 14
cagcccggat cctcgcagct 20

<210> 15
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 15
gggcagcccg gatcctcgca 20

<210> 16
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 16
tggatgtggg atccggcacg 20

<210> 17
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 17
tggctattag gccccggctt 20

<210> 18
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 18
atgtcctcag agcctgcctc 20

<210> 19
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 19
ttctggaagc tgaggtcttc 20

<210> 20
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 20
cccttctgga agctgaggtc 20

<210> 21
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 21
tagccctcct tccgggtggc 20

<210> 22
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 22
ctgatgccct tgaaaaacca 20

<210> 23
<211> 20
<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 23
gcccagcatg ttgccgggag 20

<210> 24
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 24
aaggagccca gcatgttgcc 20

<210> 25
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 25
atgaaggagc ccagcatgtt 20

<210> 26
<211> 20

<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 26
gatcatgaag gagcccagca 20

<210> 27
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 27
ccggatcatg aaggagccca 20

<210> 28
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 28
cggacaaaga gtagcttcct 20

<210> 29

<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 29
cagggtccgg atcttgtaat 20

<210> 30
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 30
tcgttcccct tcttgtagtg 20

<210> 31
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 31
gacagtttct ggcagagccc 20

<210> 32
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 32
gacatgcagg gcaccgacag 20

<210> 33
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 33
ggcttggaag acatgcaggg 20

<210> 34
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 34
agctccaagt ttcttctcca 20

<210> 35
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 35
cccagctcca agtttcttct 20

<210> 36
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 36
ctgcccagct ccaagtttct 20

<210> 37
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 37
ggtggccatc cagacttccc 20

<210> 38
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 38
ttgttgtagg tggccatcca 20

<210> 39
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 39
tgtgcttgtt gtaggtggcc 20

<210> 40
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 40

tggtgtgctt gttgtaggtg 20

<210> 41
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 41
gacatgctcc ctggcttcat 20

<210> 42
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 42
ggaaggcctc caccgacatg 20

<210> 43
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 43
gctgcagagt tttcatcacg 20

<210> 44
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 44
aagtttgacc agcttgtcat 20

<210> 45
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 45
ctccgtgatg atgtagatgg 20

<210> 46
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 46
catcactttt cagaaagtcc 20

<210> 47
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 47
ctgcttgctg ccctcatcac 20

<210> 48
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 48
ggctgagaag tcaatgagtt 20

<210> 49
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 49
cttctgcaat ctgggctgag 20

<210> 50
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 50
tgccttctgc aatctgggct 20

<210> 51
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 51
aggccatgcc ttctgcaatc 20

<210> 52
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 52
tgctcgatga aggccatgcc 20

<210> 53
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 53
tagttcctct gctcgatgaa 20

<210> 54
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 54
tcggtggatg tagttcctct 20

<210> 55
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 55
tcagcaatct tacacaccag 20

<210> 56
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 56
gacccgggcc aggccaaagt 20

<210> 57
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 57
tcgttgtcct caatgacccg 20

<210> 58
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 58
aacttggccc cttcccgagc 20

<210> 59
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 59
gcttcaggag ctgtccactt 20

<210> 60
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 60
tctgacttga tggtgaagga 20

<210> 61
<211> 20
<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 61
gggatccggc cgtaggtgac 20

<210> 62
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 62
ggtttgacat ccctgggtaa 20

<210> 63
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 63
catccggtat ccacgctcca 20

<210> 64
<211> 20

<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 64
gcgcatcatg atgttgtaga 20

<210> 65
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 65
agcacactct ggatgtattc 20

<210> 66
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 66
tccagcacac tctggatgta 20

<210> 67

<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 67
tcatccagca cactctggat 20

<210> 68
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 68
atggctgctg ttggtactgg 20

<210> 69
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 69
cctccctatc atggctgctg 20

<210> 70
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 70
ccttcgagcc accacctggg 20

<210> 71
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 71
cagtccaacc tacccactgg 20

<210> 72
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 72
ggattgcaag agtcaaaaag 20

<210> 73
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 73
gtcagattgt ggattgcaag 20

<210> 74
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 74
cctgagaatg tcagattgtg 20

<210> 75
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 75
gctgtaacta aaatccaacc 20

<210> 76
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 76
acagctgtaa ctaaaatcca 20

<210> 77
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 77
actattttga aagtttccct 20

<210> 78
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 78

tcatttcact attttgaaag 20

<210> 79
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 79
taagacttgc atttatatct 20

<210> 80
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 80
agatgtgcac caccatgctt 20

<210> 81
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 81
tgcaccaccc tatattatca 20

<210> 82
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 82
aacatacata ttaggctggt 20

<210> 83
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 83
gagtagcttc ctgaattgac 20

<210> 84
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 84
tcgttcccct ctggaacaga 20

<210> 85
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 85
gggtccttac ccatccagac 20

<210> 86
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 86
ggccagcaga agatgccaca 20

<210> 87
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 87

tttgacatcc ctgaaaagga 20